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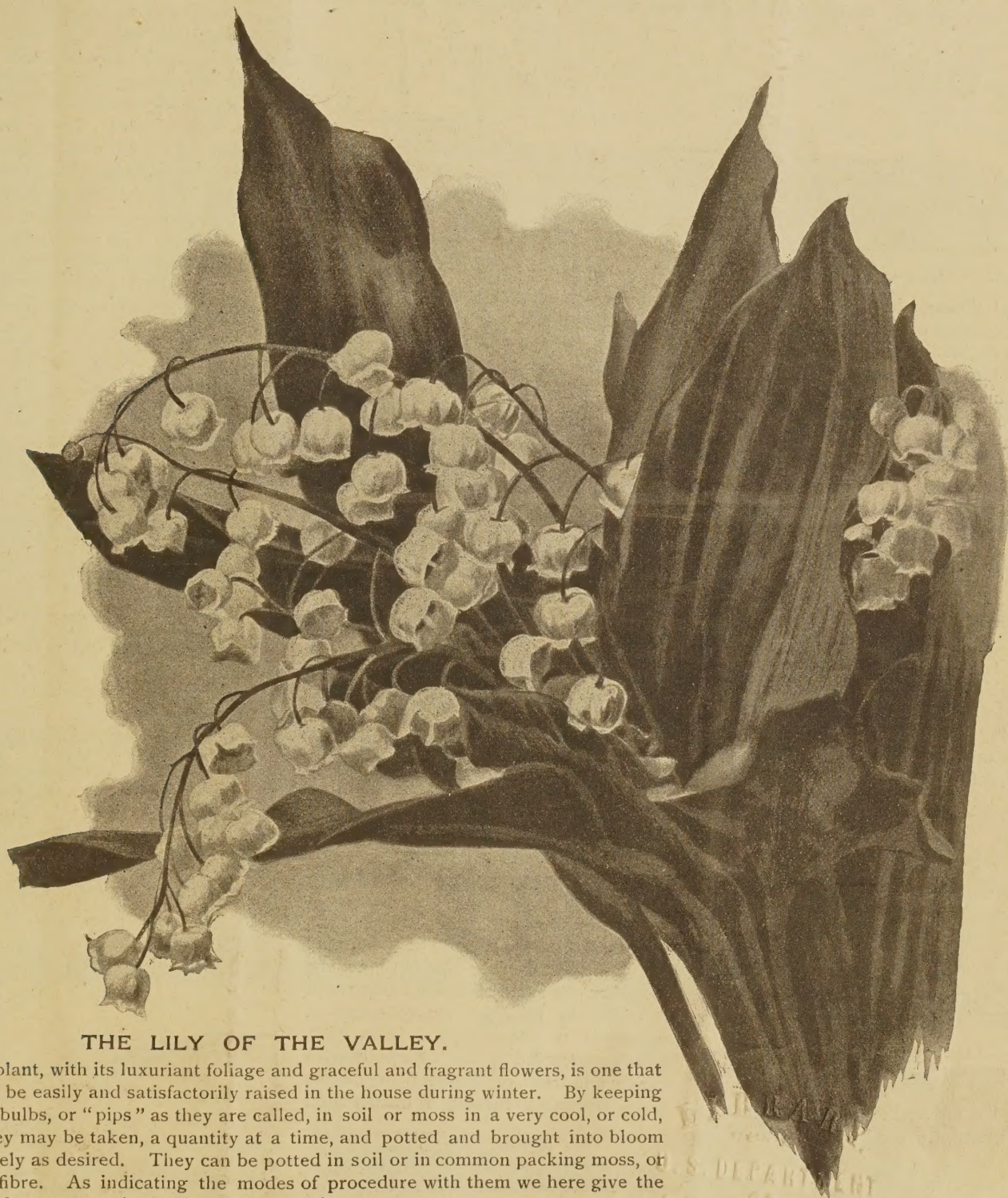
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No. 1



THE LILY OF THE VALLEY.

THIS plant, with its luxuriant foliage and graceful and fragrant flowers, is one that can be easily and satisfactorily raised in the house during winter. By keeping the little bulbs, or "pips" as they are called, in soil or moss in a very cool, or cold, place, they may be taken, a quantity at a time, and potted and brought into bloom successively as desired. They can be potted in soil or in common packing moss, or in Jadoo fibre. As indicating the modes of procedure with them we here give the method of an amateur in nearly his own words:

The pips were rolled in damp sphagnum or packing moss and laid out of doors for a night to freeze solid. They were then taken in and allowed to thaw, after which the roots were cut off to a length of about three inches. A little moss was placed at the bottom of a six-inch pot; then a pip was set in the center and others placed around it about an inch apart, the spaces between filled with moss, then more pips until the pot was full, except an inch in thickness of moss around the inside of the pot. All spaces were filled up with moss. Soil may be used the same as moss. The tops of the pips stood even with the top of the pot. A layer of moss was placed over them to keep them in the dark; a piece of dark woolen cloth will do as well. Tepid water was poured on until it ran through at the bottom. The pot was set on the reservoir at the back of the cook stove, and water supplied once a day; at night it was removed to the sitting room, where there was a constant heat. In two weeks the shoots appeared, in three weeks they were two or three inches high, with a flower-stem to nearly every one; they were then removed to a cooler room, with a good light. In thirty days I had a pot of plants covered with bloom, and handsome foliage.

THE CONTOUR OF THE LAWN'S SURFACE.

THE contour of the lawn's surface has much to do with imparting pleasing character to any ornamental grounds. In many respects contour is more important in general appearances than are the trees, shrubs and other features that we class as lawn embellishments. Take for instance a lawn that is flat in appearance, or one that is de-

pressed through its center, and it leaves an impression of tameness in the mind that is decidedly unpleasant, as compared with a like garden, which may be slightly crowning at the center. Plant a dishing garden as you may, it can never show forth the character to please as can the crowning garden, even though less pains and expense are bestowed on the planting of the latter.

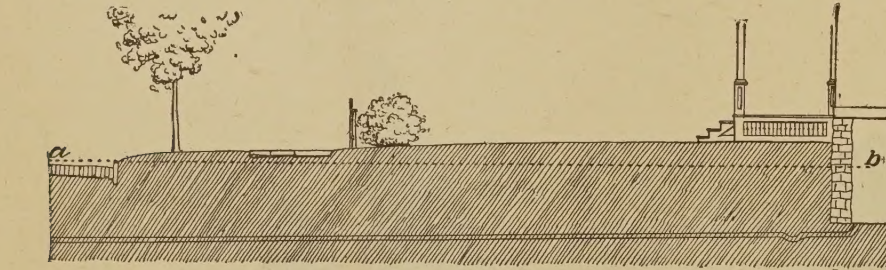


FIG. 1—PROFILE OF A FLATTISH FRONT LAWN, HAVING A TAME EFFECT.

pressed through its center, and it leaves an impression of tameness in the mind that is decidedly unpleasant, as compared with a like garden, which may be slightly crowning at the center. Plant a dishing garden as you may, it can never show forth the character to please as can the crowning garden, even though less pains and expense are bestowed on the planting of the latter.

Carrying out this principle in a practical manner, as applicable to improving home grounds and reference may be made to certain illustrations with advantage. No one, of course, would locate a home in a dishing spot of land, or even on a flat area, if one that is somewhat crowning is available. Still, not enough attention is paid to choice of location as between building sites that are slightly, and such as are more elevated. To illustrate the point, reference may be made to figures

from the commercial standpoint, should it come to selling the place, and it is safe to assume that the improved effect in figure 2 would count more for securing a

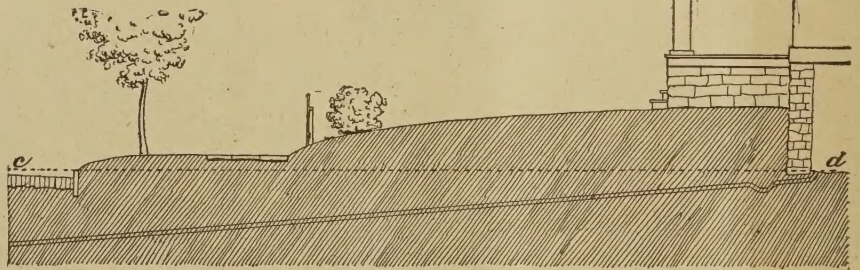


FIG. 2—SIMILAR TO FIG. 1, BUT OF BETTER APPEARANCE BECAUSE MORE CROWNING.

buyer than would five hundred dollars, or perhaps a thousand dollars extra put into the cost of the house of the other. Nor should health considerations be overlooked. In the matter of drainage the place that presents the better appearance from a garden standpoint is likewise greatly ahead of the other from a sanitary standpoint.

The advantage of the crowning center is again shown in figure 3, which represents a lawn plat embellished with shrubbery, around which a driveway passes, forming a turning place. The upper part shows the plat well rounded at the center; the other the same somewhat depressed through the middle. No comment is necessary to show that such a plat, whether occupied in part or wholly with shrubs and trees, or whether being mainly lawn, possesses increased beauty and

boldness for having a crowning surface outline. The plat here illustrated is some forty feet across, but the same rule, as regards the better effect of a rounded surface may be said to apply generally to home gardens, either in their entirety or in their parts.

Figure 4 represents two ways of finishing a front lawn in cases,—now so common in many towns—where a street fence is not required. There the crowning contour with a sharp slope or fall in the surface near the sidewalk, prevails in each instance all with good effect. Two methods of treating the descent are shown, the one by employing a retaining wall the other without. There seems to be a liking for such retaining walls in many cities, judging by their prevalence, but the taste that calls for them is questionable, make no mention of the cost of the walls, which is considerable. True, the wall, in a measure, serves for a fence, and this no doubt frequently accounts for its presence. But to treat the same slope as shown in the lower part, by having a

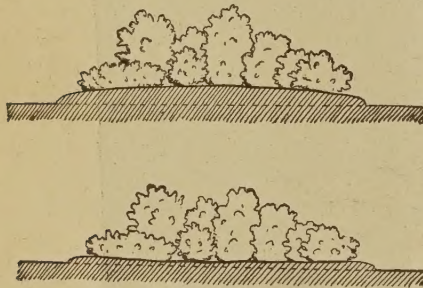


FIG. 3—A LAWN PLAT SURMOUNTED BY DRIVEWAY, SHOWING THE BETTER EFFECT OF THE CURVING CONTOUR.

1 and 2 annexed. These figures show the front-lawn contours of two village homes.

It is seen in figure 1 that a line starting at the street curb *a*, strikes the front cellar wall of the residence *b* at a point more than half way between the cellar bottom and the ground floor. In figure 2, on the other hand, a similar level line *c d* starting at the curb strikes the cellar at its floor. In other words, the first or ground floor of figure 1 is about three

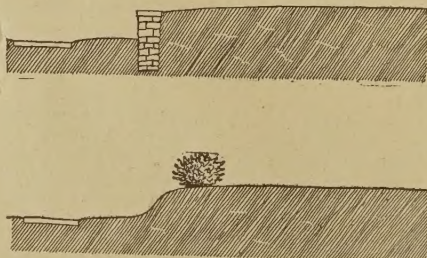


FIG. 4—TWO WAYS OF TREATING A FRONT LAWN SLOPE.

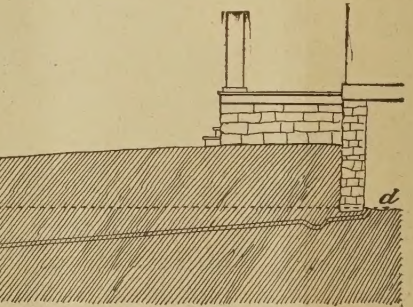


FIG. 5—TREATING BOLD NATURAL VARIATIONS IN HOME GROUNDS.

struction of buildings, walls, sidewalks, curbs, pavements and the like unavoidably are met, it should be the aim, as far as possible, to keep the garden plats free from similar effects. In no instance have we too much of garden beauty. Let us make the most of our grounds by treating

them as garden-like as the case will allow.

A front slope surmounted by a low hedge may answer about as well for defense as will the low wall. Indeed, if that perfect shrub for such places be used, namely, Thunberg's Japan Barberry (*Berberis Thunbergi*), this arrangement may be more effective as a defense than even is the low wall, and garden effect at the same time be promoted. What gives this barberry especial value in such places is, first, that it is very dwarf—we have never met one as high as three feet, even when untrimmed; second, it is prickly, to an extent that no dog or child, would care

from life. In this instance where there is so much natural boldness of outline, it seemed better to introduce some artificial regularity in the surface. The lower part of the engraving shows the contour as it appeared before improving, the latter the same afterwards.

Now, while the original form was admirable for treating for fine landscape effect—nothing could be better—yet it was not to be overlooked that gardens are for use as well as for beauty. A lawn that is decidedly mound-like is less comfortable for the various uses of a home than is one that is not so marked in this

CONIFERALES.—No. 3.

EVERYONE who attempts to classify conifers, or any other plants, is sure to do so differently to anyone else. The result is worse than any confusion of tongues could ever have been, for the terms employed could never have been equalled at any tower of Babel. And yet the city of New York has voted \$500,000 to perpetuate another installment of this very confusion. Charles Darwin once broke out parenthetically in one of his letters about plants, that his poor head was all in a swim; and he left a large sum of money to help straighten



SEQUOYA GIGANTEA.

to venture across a hedge composed thereof; third, this barberry is one of our neatest and handsomest low flowering shrubs; it is handsome in foliage always; it is handsome in flower and it likewise is handsome in fruit, for it bears brilliant scarlet berries which are edible. This valuable shrub, of rather recent introduction from Japan, is not yet widely known, although now to be had in most nurseries.

Figure 5 sets forth two ways of finishing the contour of an elevation and slope, where the natural variation of the surface is considerable, the illustration being

respect. We want, for instance, places where the children can romp and roll without rolling down hill, and where tennis and other ball games can be played without inconvenience. Keeping these things in mind, the treatment bestowed upon the case in hand was to produce the contour shown in the upper part of figure 5. That is, attention was given to even up the top somewhat, but not to wholly get rid of the crowning feature, and then to even the slope to harmonize. As the slope had a descent of fully twenty feet, agreeable relief thereto was obtained by planting some shrubs over the surface. Altogether this treatment of the place proved very satisfactory. *

out the scientific (?) tangle. Now the labor is barely completed, before a local pundit is enabled to turn quite a good deal of the work helter-skelter again,—all in the name of “exact science.”

I have before me two or three works emanating from, or copied after the Kew dictum, and no two of them correspond; yet they assume to talk loftily about “garden names.” Gardeners will need to adopt and simplify some system for themselves before very long, for it is more and more apparent that science,—plant science,—is deliberately designed to obscure and confuse,

As a garden group the Cupressineæ and Taxodineæ may very well be planted together. In the books they sometimes follow and sometimes lead each other; Nature never cuts such capers,—she disposes them each with effect, and this is, or should be, the aim in the pinetum. In this paper they are merely brought together for ease of reading, and there is no attempt to closely follow authorities who evidently don't know "where they are at."

Sciadopitys verticillata is the Umbrella Pine, a monotypic plant from Japan; hardy, elegant, and distinct in its character. It is one of the conifers eminently suited to amateurs who desire something



SCIADOPITYS VERTICILLATA.

choice and who do not begrudge two or three dollars for it.

Sequoia is the "Big tree of California." There are two species, *S. gigantea*, and the redwood, *S. sempervirens*, or *Taxodium sempervirens*, as botanists have permitted it to be better known. Each species has two or three varieties. They do not do well in the Atlantic States, not even southwards; on the contrary, it is a singular fact that the "big tree," as well as some other Californian conifers do better near the Canadian border, especially in Western New York. The illustration on the preceding page is of a few trees in the nursery of Ellwanger & Barry, at Rochester.

Athrotaxis is a Tasmanian genus of three species, all of which are in cultivation in Britain,—especially in Southern

England. They are too tender for any but the equable climates of the United States.

Cryptomeria is a monotypic genus from North China and Japan. The plants vary a good deal, both in appearance and hardihood. The best tree I know of northwards is at Trenton, N. J. It is thirty or thirty-five feet high, and has perfected crops of seed for many years. It appears to be the variety *elegans*. In severe winters it browns a good deal, but does not suffer otherwise.

Taxodium is in two species, from Mexico and the United States. Our own species, *T. distichum*, is perhaps the loftiest tree of the Atlantic seaboard, and specimens stand in New Jersey and Southern Pennsylvania a good deal more than 100 feet high, with immense trunks. It is a very useful and characteristic deciduous conifer, which should always be transplanted in a young state, say up to four or five feet high. The variety *pendulum* is often sold as *Glyptostrobus*.

Glyptostrobus is a Chinese genus in two species of somewhat similar deciduous character.

Actinostrobus, in two species, is from Western Australia, and adapted only to parts of California.

Callitris, in fifteen species, is from Australia and adjacent islands, and also from South Africa and neighboring islands.

Fitzroya is in two species; *F. Patagonica* from southern Chili, etc., and *F. Archeri* from Tasmania,—both of course too tender for the north.

Widdringtonia is the "Milan Cypress" from the mountains of Central Africa, and it is hoped it may prove of use in the south Atlantic States.

Libocedrus is given eight species in some works; several forms are in cultivation and best adapted to the Pacific coast and southwards.

Thuyopsis, and a number of other reputed genera, have been dropped by the botanists, with how much reason anyone who has travelled among them or grown many of them from seed can tell. I have no doubt whatever that our laboratory scientists will presently insist it is all wrong. There is also a disposition to fuse Cupresseæ and *Thuya*,—only restrained by the fear of the intolerable confusion which would result. It would be well if everyone only thought of the confusion!

Thuya in some books is given but four species, in others five are enumerated, all of which except *T. Japonica* have a multitude of cultivated forms. They are among the most useful conifers we have in the Northern States, and as they abound in dwarf and variegated varieties they are extensively raised by nurserymen, and commonly planted. The varieties of our native *Arbor vitæ*, from their hardihood, are particularly useful; there are at least fifteen or twenty of these,

varying greatly in color and habit. *T. gigantea* also has several varieties. I have been under the impression that we have a few good specimens of some fifty feet high of this species in the middle Delaware valley, but Dr. Robinson, of the Gray Herbarium regards them as "Retinosporæ forms of *Libocedrus decurrens*, perpetuated by cuttings." There is much confusion and it is not lessened by the fact that the plants have never fruited, and that *Libocedrus decurrens* is

tender even at Philadelphia.

T. dolobrata is the *Thuyopsis* before spoken of, a native of the Japanese mountains. *Thuya orientalis* is from China and Japan, and is the most prolific in varieties of any,—upwards of twenty being regarded as good and distinct.

Cupressus, with a dozen or more species, is now made to include *Chamæcyparis*, *Retinospora*, and quite a good many of what gardeners have called *Thuyas*. I would not offer an opinion to anybody as to how long the arrangement will obtain. The various species are from North America, the temperate parts of Asia, southeastern Europe, and the mountains of Central America. Those known as the *Retinospora* kinds, and *Cupressus Lawsoniana* in variety, are the most hardy, but cannot be trusted too far north,—in fact *Lawsoniana* seems to find its limit of endurance



IRISH JUNIPER.

at Princeton, N. J. *Cupressus thuyoides* is, to be sure, hardier than either, but somehow it seems to find its way into gardens but rarely.

Juniperus is credited with twenty-nine or thirty species, nearly all of which are in cultivation. They are widely distributed over the sub-tropical mountains and the cooler parts of the Northern Hemisphere. Many of the species vary amazingly, and they, together with the

Thuyas, form a most important part of a northern pinetum. Unfortunately our friends in California have a monopoly of several fine species, both of their own and other warm-temperate regions. Yet, anyone setting out to form a collection can get together a dozen or so of forms of our "red cedar," *J. Virginiana*, half a dozen of *J. sabina*, as many of *J. communis*, with several outlyers from northern Asia.

I may say in conclusion that it would seem a common sense arrangement to group the berry-bearing gymnosperms in one tribe. We would deal with them nicely thus at the North where yews need some protection, but no modern systematist thinks so to arrange them.

JAMES MACPHERSON.

Trenton, N. J.

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PLANT NUT TREES.

WHEN planting trees for ornament or shade, it is well to combine use and beauty by planting trees that will raise a supply of nuts for family use or for profit. Such trees are generally longer lived than fruit trees, are fully as good for shade, and when well cared for are as profitable. The nuts are easier to handle and ship long distances, as they are non-perishable under all ordinary circumstances; a few days delay in gathering, shipping or selling out will not cause a loss to grower, dealer or consumer.

Here in the West walnut, hickory and butternut trees are native, and one can have the nuts for the gathering of them, as usually the woods are full of them. In spite of this fact, many of the trees are

being planted in the towns and along the roadside in the country. Several of the less common nut trees have been found hardy enough for all practical purposes, and people are planting them more and more each year. Many kinds will yield a crop which will sell for \$25 or \$30, and that can be considered a very good return for the outlay of time and money.

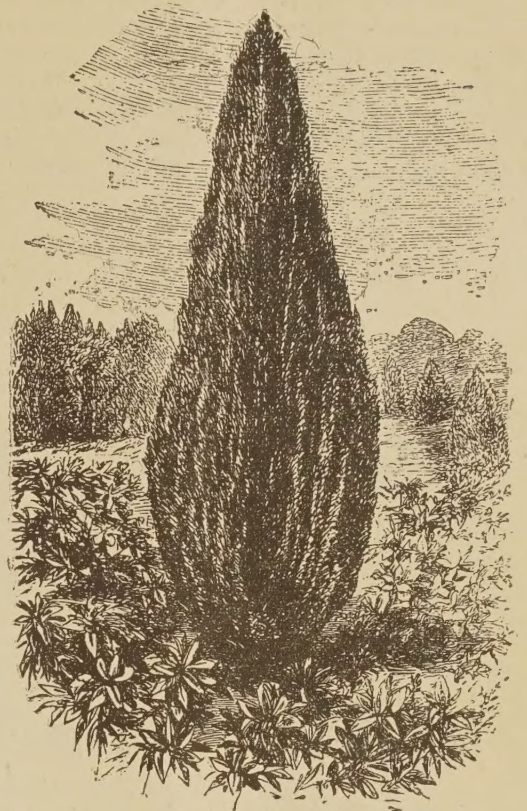
Several varieties of chestnuts are easily raised in most localities, the American sweet variety being as fine as any, though much smaller than the new sorts.

In places where chestnut trees have been cut down and the new growth is coming up, the trees can be grafted to the new varieties, which will soon come into bearing. The Japan Giant chestnut bears nuts of enormous size, the burrs opening when ripe without the aid of the frost; the trees come into bearing earlier than any of the other sorts and the trees are quite dwarf. The care required by the chestnut trees is just the same as that given to apples, and the rule applies in a general way to all nut trees. Should any one want to grow the trees from the chestnuts, be sure to plant the nuts where the trees are to stand, as a novice in the work would probably lose most of the trees in transplanting, where a regular nurseryman could succeed with nearly all of them.

Almonds, both hard and soft shell, are desirable trees to plant where they can be raised; the latter being less hardy must not be attempted too far north. One variety, the Russian almond, has proved to be perfectly hardy at the North and bears a sweet, plump nut of good flavor.

Filberts are much like the common hazelnuts which are native here; they are of easy culture and come into bearing early. The variety "Kentish Cob" is highly recommended for cultivation here.

The English walnut or Madeira nut is not supposed to be very hardy north of Philadelphia, though there are some trees in bearing in New York State and some growers maintain that they are quite hardy if the young trees are protected for a few years; after that they will be able to stand the winters and bear good



CUPRESSUS LAWSONIANA—var. erecta viridis.

crops. In the South and on the Pacific coast they grow well and yield immense crops of nuts; the green nuts are used for pickling when young and tender.

Pecans are quite hardy at the North, but produce larger crops when grown in the South. The tree is a rapid grower with pale green foliage, which holds its color quite late in the fall. Some dealers recommend planting pecan trees wherever hickory trees grow and do well. This is all right for the Northern pecan, but surely no one would advise planting those from the South in such a different climate. There is a native pecan in Illinois which grows to a great size and ripens immense quantities of nuts. The nuts are of large size and good quality, and with good cultivation it seems as if a fine profit could be made from the trees. One man claims for them that he has found them to be hardier than the average apple tree, and states that he has fifty trees in good condition that have lived through a winter when the thermometer registered 30° below zero. There are also some pecan trees growing in Michigan which were planted several years ago, and so far have stood the winters with no protection.

The age at which any nut trees come into bearing depends on the care given to the trees. Some authorities state that fifteen or twenty years are necessary to bring them into full bearing, from the time the nut is planted. This is a mistake, as trees that have been well cared for should bear a bushel of nuts in ten years, and the amount will increase rapidly each year after that time. Some may enjoy



CUPRESSUS MACNABIANA.

raising these trees from seed; to be sure, it is rather a slow process, but it is interesting work. When planting the nuts, if they have thin shells, be perfectly sure that they have not dried out at all. The best plan is to get them as soon as they ripen and plant them at once. When this is

ways the better results we may expect. Another thing, do not plant the nuts deep; Nature drops them on the surface and gives them a thick covering of leaves in which the dirt catches as it blows about, then the snow covers all and helps the leaves to decay and form a covering of

suffered badly. Frosts by night and dry, cold winds by day, prevented several of the most beautiful varieties, such as *S. Van Houttei* and *S. media*, from opening their flowers. It says much, therefore, for the hardiness of *S. arguta* that it has never been better than during its last flowering season. And when that great merit

is added its undoubted superiority to all other spiræas in beauty, it is clearly one that deserves to be brought into general notice. It is as yet rare and but little known, being of hybrid and comparatively recent origin. * * It is of very graceful habit, its shoots being thin, wiry, and arching. During April they are completely covered on the upper side with compact clusters of flowers that are of the purest white. The leaves appear after the flowers, and are one to one and a half inches long, obovate, usually sparsely toothed, quite smooth, and of a light but vivid green.

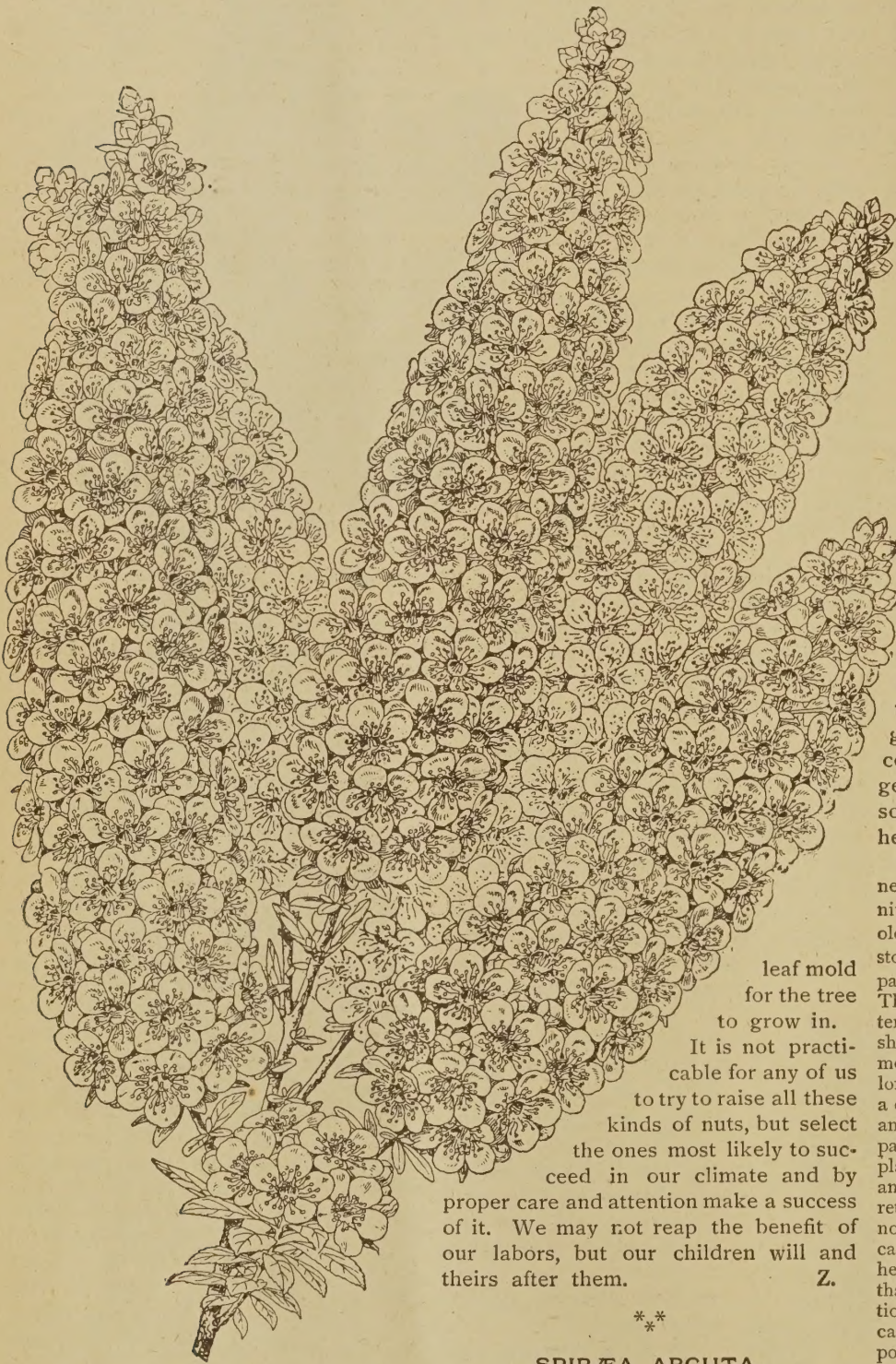
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WINTERING PLANTS IN THE CELLAR.

A writer in the *Farm Journal*, who has evidently had experience in wintering plants in the cellar, writes very instructively on the subject. A summary of his ideas are here given. It is to be kept in mind that the plants are placed in the cellar to rest, not to grow. Nothing is more harmful to them when thus stored away than water, and it should never be given unless to keep the soil from becoming dust dry. In regard to keeping geraniums in the cellar by shaking the soil from the roots and hanging them up, he says that:

"Young plants cannot be saved in that manner, and the loss of a fine lot of young geraniums led me to the discovery that it was only old plants of several years' growth, with strong, stocky roots, that could be hung to rafters or packed in barrels with any assurance of safety. The roots of the young geraniums were too tender to withstand the air, and they speedily shriveled and died." * * * "Used merely as a storage to keep them through the long, cold months, there is no place superior to a dry, well lighted cellar. Tubs of hydrangeas and cape jessamines and even some of the palms—may be trusted to it with perfect safety; plants that require rest, like the fuchsias, callas, and many others, will find it a cool, quiet retreat for their winter slumbers; and if there is no greenhouse on the place, as is usually the case, the busy housewife may trust nearly all of her treasures to its keeping, with the assurance that they will be returned to her in good condition in the spring. The great secret of taking care of them is to neglect them as much as possible. They are not growing, only resting; and if their owner would have them come strong and fresh through the winter's sleep, she will do well not to disturb their repose. If some of the pots and tubs are small, and the soil should become dry, it might be well to water them once or twice during the winter; but in no case should the soil be saturated."

In early spring if the buds on the plants are seen to be starting a little, do not give water which would only favor their growth, but keep as dry and cool as possible until time to take them out of the cellar.



SPIRÆA ARGUTA.

not possible, keep them in moist sand or sawdust until they can be started. Butternuts, walnuts, hickorynuts and filberts being hard-shelled will keep in growing condition much longer, but should be planted in the fall as they germinate better when allowed to freeze, as that cracks the shell. The fall planting is Nature's own plan, and the nearer we follow her

This comparatively new spiræa is figured in the *Gardeners' Chronicle* and here reproduced. The following is the account given of it by a correspondent of the same journal:

The earliest of the flowering trees and shrubs were this year fortunate in having warm and moist weather, but no spring in recent years was more unfavorable to the flowering of those that followed them. Among other plants, the spiræas

leaf mold
for the tree
to grow in.

It is not practicable for any of us to try to raise all these kinds of nuts, but select the ones most likely to succeed in our climate and by proper care and attention make a success of it. We may not reap the benefit of our labors, but our children will and theirs after them. Z.

* *

SPIRÆA ARGUTA.

POTATO SCAB.

Our readers at different times have had the benefit of the experiments and discoveries made in relation to the growth of potatoes free from scab: but the subject is an important one and no apology is needed in referring to it again and stating the case as it stands at the present time. This we are able to do by reproducing the government report as made in Farmer's Bulletin No. 56 and recently issued by the Department of Agriculture, at Washington. Experiments have been made at various stations and in different parts of the country and by the use of different substances to check or prevent the occurrence of scab on the growing tubers. At some stations particular attention has been given to the use of flour of sulphur, coating the seed tubers with it, and also mixing it in the soil. At one time some experiments appeared to indicate that this substance might be employed in this way to advantage, but later trials, repeated at different places, shows that it has but little effect, and this not commensurate with the expense. The report that here follows may be accepted as fully trustworthy, and the best method now known to prevent the occurrence of scabbiness of the skin of the potato.

REPORT.

The disease of potatoes which results in the formation of brownish scab-like patches on the surface of the tubers is so well known as not to require any detailed description. It is generally attributed to a microscopic organism to which



FIG. 1.—The scabby potatoes used as seed in the test.

the name *Oospora scabies* has been given, although other agencies may, to some extent, produce effects.

Many of the experiment stations have studied this disease in order to ascertain the cause and remedy. The Connecticut State, Indiana, and North Dakota stations were the pioneers in this work and the investigators at these stations discovered both the cause and some of the means of its prevention.

It was found that soaking the seed tubers before they were planted in a solution of corrosive sublimate would greatly decrease, if not entirely prevent, the appearance of scab on crops grown from such seed. The method of treatment recommended is to soak the thoroughly washed tubers for one and one-half hours in a solution of two and one quarter ounces of corrosive sublimate in fifteen gallons of water. It

is best to dissolve the corrosive sublimate in two gallons of hot water and then dilute it to fifteen gallons. As this mixture is very poisonous all the treated tubers should be planted and



FIG. 2.—The crop resulting from treated seed.

the remaining solution disposed of so that stock may not be injured by it. Metallic vessels are corroded by it, and one of the best as well as the most convenient vessels for use would be a large tub or a barrel. After washing the tubers they may be placed in a bag of some coarse material (a coffee sack is good) and placed in the solution for the required time, after which they are dried, cut, and planted.

Experiments at the Michigan station showed that the entire cost of treatment need not exceed two cents per bushel. If treated in this way, a clean product may be obtained when the potatoes are planted in soil which is not already infested with scab. The scabby seed tubers are shown and with them the potatoes grown from this seed, treated and untreated. In extensive trials it was found that where treated seed tubers were used the crop contained only 6.8 per cent of slightly scabbed potatoes, as compared with 60.1 per cent of scabby potatoes where the seed was not treated. It was also found that longer soaking tended to reduce the scab, but also tended to reduce the yield. At the Indiana station the result of treating Beauty of Hebron potatoes shows for the treated lots 8.25 per cent of scab, as compared with 78 per cent for the untreated lots.

Recent investigations at the Indiana station indicate that soaking the seed tubers in a solution of formalin or formic aldehyde, eight ounces in fifteen gallons of water, will prove efficient in reducing the disease. This solution is said to have all the advantages of corrosive sublimate, without being poisonous, and if further experimentation demonstrates this to be true, it can be recommended with greater confidence than the other mixture.

An important factor to be considered in combating potato scab is the fact that the fungus is able to live in the soil for a considerable number of years, the exact time is not yet known. On this account potatoes should not succeed themselves in a soil where a scabby product has been grown. Nor should beets be grown in such soil, for they, too, are subject to the disease, as shown by the accompanying figure (figure 4) taken from a bulletin of the North Dakota station.

Experiments conducted in Rhode Island and North Dakota seem to indicate that acid soils

restrain the development of the scab fungus and that the addition of lime, ashes, barnyard manure, or other alkaline fertilizers to an acid soil tends to increase the development of scab in about the same proportion that the acidity of the soil is decreased.

At the New Jersey and Delaware stations experiments have been carried on to test the effect of sulphur as a soil treatment for the prevention of scab. In New Jersey the cut tubers were rolled in sulphur, or sulphur was placed in the rows with them, and the amount of scab appears to have been greatly reduced. Potatoes planted in ground which had received 300 pounds of sulphur and the same amount of kainit per acre the previous year were almost free from scab. This is claimed to show that the fungus was largely destroyed the first year or the fungicidal action is maintained for at least two years. In Delaware, where the tubers were rolled in sulphur before planting, the results obtained indicate that such treatment will diminish the amount of scab in the crop



FIG. 3.—The crop resulting from untreated seed.

where grown upon land presumably free from the fungus. Numerous other fungicides have been tested at different stations with varying results.

At the South Dakota station eau celeste and Bordeaux mixture were found to greatly reduce the growth of scab, but they also reduced the yield. Dipping the seed tubers in solutions was found to be a more efficient method of



FIG. 4.—"Deep scab" of potatoes on beets.

treatment than spraying the cut potatoes in the open furrow. It is also claimed as a result of their experiments that the thick-skinned, dark-colored varieties are less liable to scab than those not so protected. Further investigations along the line of resistant varieties would seem desirable

* *

COOKING POTATOES.—The loss of nutrients is very great by peeling potatoes and soaking them in cold water or by placing them in cold water preparatory to cooking. The experiment station of Minnesota has shown that "when the potatoes are peeled and placed directly into hot water, about eight and a half per cent of the total nitrogen is extracted and lost. If the potatoes are peeled and placed in a kettle containing cold water the losses are much greater." The loss is least when the potatoes without peeling are placed directly in hot water. In that case the total loss of nitrogen is about one per cent.



ROCHESTER, N. Y., NOVEMBER, 1897.

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CHARLES W. SEELYE, Editor.

ELIAS A. LONG, Associate,
(formerly conductor of *Popular Gardening*).

Publishers are invited to use any articles contained in this number, if proper credit is given.

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H. P. HUBBARD, M'gr.

Sequoias Growing in Rochester.

The engraving of Sequoias presented on page 3, of this number, was kindly loaned us by Ellwanger & Barry of the Mount Hope Nurseries, of this city. The trees represented were raised from seed sown in the greenhouse.

Years ago the young seedlings were planted in beds, and finally transplanted to the places where they have grown. The firm mentioned raised a large number of young trees of Sequoia at that time and found sale for them mostly in England and Scotland.

* *

Book Notes.

FAMILIAR FLOWERS OF FIELD AND GARDEN.—It has become almost a proverb that Americans care for little but the "almighty dollar." It is not true, and the many volumes that are being issued on subjects of nature testify that the people of this country are readers, and students of nature, and the pursuit of natural history subjects is increasing.

In the volume whose title appears herewith, we have an usher who stands ready to introduce in the pleasantest manner all who wish to make an acquaintance with the plants that are everywhere to be seen in the country.

The author, Mr. F. Schuyler Matthews, in a simple and interesting way, tells

about the plant, and then presents a drawing by which it is easily recognized, and, so, in this book of 300 pages, every one of them shines with lucid descriptions and observations and correct illustrations. It is a pleasant and instructive volume and every country dweller and country visitor should have a copy of it. It is published by D. Appleton & Company, of New York. Price \$1.75.

++

FAMILIAR FEATURES OF THE ROADSIDE.—This is the title of a volume by the same author as the preceding, and of similar import, except that in this work the birds, bees, butterflies, moths, squirrels and other animals as well as the native plants are the subjects of his notice and illustrations. The illustrations are all made by the author himself from the specimens before him. The book also contains a considerable number of half-tone landscape views, mostly of New England scenery. Issued by the same publishers and at the same price as that of the preceding notice. It is equally to be commended.

++

GARDEN MAKING.—Macmillan & Company, publishers, of New York, announce the early publication of a volume with the foregoing title. The volume will be uniform with the Garden-Craft series, and is being prepared by Prof. L. H. Bailey, assisted by specialists in each department. The thought is to make this book a guide to daily practice in the garden, whether that garden be a city backyard or an enclosure of acres. While it will present scientific truths, it will in no sense be a mere scientific treatise, but instead will give in simple language such information as every man or woman who buys a single packet of seed or attempts to grow a single plant, is in need of. No modern American work exists which covers this important field. "Garden-Making" will be profusely illustrated, every important operation being graphically shown. Price \$1.00.

++

FAVORITE FLOWERS OF GARDEN AND GREENHOUSE.—In our issue of last July a pretty full account was given of the character and scope of this fine work, published by Frederick Warne & Co., of London and New York. The fourth and final volume has lately been issued; this volume is complete with a full index to the whole set, by means of which easy reference can be made to any plant noted in it. The colored plates, 316 in number, and the text are both admirable. The writers, Edward Step, F.R.S., and William Watson, F.R.H.S., assistant curator, Royal Gardens, Kew, are unquestioned authority for the contents. It is issued in different styles of binding and at different prices, the particulars of which may be

learned by application to the publishers at New York.

++

MISSOURI BOTANICAL GARDEN, EIGHTH ANNUAL REPORT.—Mr. William Trelease, director of the Missouri Botanical Garden, for his report for 1897 has prepared another volume of much botanical value, and which the trustees have issued in octavo form and in the highest style of mechanical art. Besides that which relates directly to the business affairs of the garden and the plans and designs for future work, this report is occupied largely with the "Mosses of the Azores," "the Mosses of Madeira," and "Botanical Observations on the Azores." These subjects are illustrated by sixty-six large lithographic plates of plants. The Botanical Garden of St. Louis with Mr. Trelease at its head is making a splendid reputation and becoming a powerful factor in horticultural education in the Middle West.

++

OUR GUESTS.—Such is the title of a little volume intended as an album for the inscription of the names of family visitors. It is prepared and published by J. W. Sanborn, of Smethport, Pa. The subject of hospitality is treated in prose and verse, mostly selections from noted writers, and a few contributions from the author. Its use in the household will supply the means of recording many pleasant memories.

The concluding selection is a "Farewell Blessing," from Robert Burns:

My blessing on ye, honest wife,
I ne'er was here before;
Ye've wealth of gear for spoon and knife,
Heart could not wish for more.
Heaven keep you clear from strut and strife,
Till far ayont fourscore;
And by the Lord o' death and life,
I'll ne'er gae by your door.

* *

Peach Bud Protection.

Peach-growers will be gratified to learn of a cheap and efficient method of protecting their trees from injury in winter. Experiments made in Missouri have proved that spraying peach trees with whitewash will protect the fruit buds from winter injury, even when the temperature falls 10° or 20° below zero. The injury to the buds by the cold is due to the fact that on warm or bright days the action of the sun heat on them has caused them to swell and thus they are in a condition to be injured by the cold weather. The whitewash reflects the heat and the buds remain dormant and are able to sustain the low temperature. The whitewash consists of four parts water, one part skimmed milk and enough freshly slaked lime to make as thick a wash as can be conveniently pumped through a Bordeaux spray nozzle. In the experiments made the first spraying was given the last of December and subsequently, at intervals, three more were given during the winter.

Letter Box.

In this department we shall be pleased to answer any questions relating to Flowers, Vegetables and Plants, or to publish the experiences of our readers. EDITOR.

A Native Solanum.

I send herewith a plant that puzzles me; it is the first I ever saw of the kind and I can find no one here who knows what it is. Is it poisonous, or of any value for anything? It seems to be a hardy plant, and might be of interest as a curiosity. A. W.

The plant is one of the nightshade family, *Solanum rostratum*. It has no known value for any purpose.

++

Snake Cactus.

Will you inform me through the MAGAZINE how to take care of a snake cactus? Also how many years it takes before it blooms. MRS. E. P.

Wellsboro, Pa.

Keep the plant nearly dry during the cold season. About the first of March commence to give water gradually. During summer the plant should have a good exposure to the sun and what water it can appropriate.

++

A Moss-like Plant.

Will you kindly give me the name of the plant from which the enclosed leaf is taken, and tell me how to care for it? I keep it in the shade and try to keep it damp, but not wet. It begins to grow and then the leaves become very dry, and seem to die. M. R. C.

The plant is a selaginella. The treatment mentioned is right in all respects, except that the air of the room is probably not sufficiently moist.

++

Cherokee Rose.

There is a legend of the Cherokee rose which I have tried to find, but have failed thus far. Years ago I heard or read it, but can find no one to give me the "missing links." May I hope it will interest some of the readers of the MAGAZINE and that some one of them may be able to reproduce it? The story was of an Indian maiden who carried in her bosom a slip of Cherokee rose to the home of her warrior and planted it. I want to know what tribe she was of, where she went from and where to, and all about it. Can anyone tell, and oblige a lover of the Cherokee rose? MRS. A. S. H.

Unionville, Ohio.

++

Wineberry.

We have on our place a wineberry plant, two years old,—something between a raspberry and a blackberry. Instead of growing tall and shaped like a bush, it throws out long branches (five feet), and is not over a couple of feet high. Should I trim these into a bush shape, and when,—in spring or fall? Bath, Maine. C. D. H.

It will probably be best to leave the long branches in the position they have grown, or even to bend their tips down to the ground and fasten them there, for the winter, in order that they may be the better protected by snow. In the spring lift them and tie them upright, and trim somewhat to induce branching.

++

Care of Cycas.

Kindly state through the MAGAZINE treatment for the cycas. G. S.

New York City.

Cycas revoluta during its growing season requires an abundance of water, but later, when the leaves commence to take a yellowish hue, use water quite sparingly. The principal new growth usually occurs in May and June, and at that time a temperature of 80° to 85° is desirable; at

other times the ordinary heat of a living room is sufficient. This plant is not entirely as suitable as a house plant as some of the easily managed palms.

++

Rose Seeds.

Will you kindly inform me how to plant rose seeds, and how to care for them? MRS. E. C. L.

Fruit Valley, N. Y.

Rose seeds can be left in the heps as gathered, by mixing these with soil, until January. Then the seeds can be removed and sowed in a shallow box of soil, and placed in the greenhouse, or kept at a window in the house. Or, after sowing the seeds, the box may be left outside, exposed to the weather; freezing will assist the future germination. In March the box can be taken inside; the seeds for the most part will start in a month or six weeks.

++

Pruning Lilac and Weigela.—Scilla.

1—Is it necessary to trim lilacs, and, if so, how?
2—How and when ought weigela to be trimmed, or does it not need trimming?
3—Does a scilla ever bloom? I have had one two or three years, and it has never bloomed. C. B.

Sherwood, Oregon.

Both lilac and weigela bear their flowers on their young or green shoots, and if pruned in autumn or winter the bloom will be much reduced. These plants need very little pruning, as a rule, beyond cutting away any dead wood or unnecessary branches, but if at any time it should be thought desirable to shorten or head back the branches, the proper time for doing it is immediately after the plants have finished their blooming.

Keep the scilla in a cool place and let it go nearly dry this winter, and then start it again in the spring.

++

An Unsatisfactory Rose.

Kindly give me some information about the rose from which the enclosed leaves are taken. I had it planted eight years ago at the side of the piazza where the afternoon sun shines; it grows very slowly and the foliage is constantly eaten by insects in spite of all care. It has never blossomed. My other roses, planted at the same time, are in fine condition and bloom freely. Will it be likely to thrive better if it is moved in the fall to the south side of the house? It was sold to me for a climber. MRS. E. W.

Plainfield, N. J.

It is impossible to name the variety of rose from the leaves. Nor are we able to say whether it might do better if transplanted. The probability is that it would not. A rose that has been unthrifty for eight years, a special prey of insects and non-blooming, should be dealt with by only one method,—Dig it out and throw it away. Roses can be purchased too cheaply now-a-days to warrant years of patience and care in trying to bring a poor plant to a state of usefulness.

++

Asparagus.—Roman Hyacinths.—Tuberose.

1—I have read with interest and profit the queries and answers in the Letter Box, and venture to ask advice in regard to the treatment of climbing asparagus. I have several plants, and they do not die, neither do they make any material advancement.

2—I purchased a dozen Roman Hyacinth bulbs last fall, but none had more than one spike of bloom and I see they are said to produce several. What was the reason?

3—What shall I do with my tuberose bulbs after blooming in the house? MRS. W. R. S.

Madison, S. D.

1—The ornamental varieties of asparagus need an abundance of nutriment while making their growth. After a period of growth it is their habit to remain quite at rest for some time. After such a period, which may be two months or more, the plants should be repotted in very rich soil; then as they are growing, supply well with water and once or twice a week give liquid manure.

2—The reasons cannot be stated why the hyacinths did not produce more spikes of bloom. It is usual for them to produce two or more spikes of bloom.

3—Tuberose bulbs after blooming are of no use to bloom again, and can be thrown away.

++

Fuchsias.—Hydrangeas.—Sweet Peas.

1—Will fuchsias grow in the shade?

2—How shall I preserve my house hydrangea to secure blooms for another year,—shall I cut off the old growth? I have had splendid bloom this year, but know not what to do with my plants now.

3—My sweet peas have been unsatisfactory this season; I had a trench dug and filled with manure, covering with soil and planted the seed; a sunny place and quite rich soil. The vines have done fairly well, but little bloom, and the vines are drying at the bottom. Miss E. A. A.

Camden, Me.

1—The bright sunshine which we have in this country is too great for the fuchsia, and it thrives far better in a position which is shaded at least during the hottest hours of the day, and it will not resent a total shade from the direct sunshine, but it should have a good light and not be placed underneath heavy foliaged trees or shrubs.

2—When hydrangeas have finished blooming they can be shortened in and kept growing until autumn. It is well then to give them a rest for a time; they can be placed in the cellar until February and then brought out and started again.

3—In regard to the trouble with sweet peas we refer our inquirer to what was published on this subject in these pages last January, page 40, and in July, page 136.

Catarrh

In the Head is a
Constitutional Disease
And Requires a

Constitutional Remedy

Like Hood's Sarsaparilla, which, working through the blood, eradicates the impurity which causes and promotes the disease, and soon effects a permanent cure.

Catarrh From Childhood.

"My daughter has been troubled with catarrh since she was four years old. She had the disease in its worst form and tried many different medicines without obtaining more than temporary relief. She finally began taking Hood's Sarsaparilla and Hood's Pills and after using these medicines for a while she was much improved, and the disagreeable symptoms have entirely disappeared." M. W. SILSBY, Hartford, N. Y.

REMEMBER:

Hood's SARSAPARILLA

Is the best—in fact the One True Blood Purifier. Sold by all druggists \$1; six for \$5.

Hood's Pills cure Liver Ills; easy to take, easy to operate.



Pot violets dislike heat.

Do not starve the house plants.

It is time for the subscription crop.

Plan to skip the failures next year.

Evergreens—the type of constancy.

Surface drains are manure wasters.

Lily of the valley answers as a house plant.

The narcissus was mentioned by Homer 1,000 B. C.

It is injustice to Dutch bulbs to longer delay their planting.

And new chrysanthemums! What would the floral year be without them?

Why cover the plants? It is less to keep out actual cold than to prevent alternate freezing and thawing.

Grapes at one cent a pound and peaches thirty cents a bushel, as they lately have been in many markets, and even the poor can enjoy sumptuous living.

Cabbage. If the heads are wrapped in several thicknesses of paper and are hung up by the roots in a cool cellar, they will keep well for some time.

This is the season when the berry shrubs such as barberry, snowberry, burning bush and the like are much appreciated. A bouquet of berry twigs is a great attraction.

Tuberous begonias. The success of these choice and showy bedding plants, in and about Buffalo during recent years, has been so marked that they will be used more largely than ever in the Buffalo parks next season.

A plant in a pot has well been likened to a caged bird. Deprive it of water and proper food and it cannot exist. In both, freedom from disease and vermin are largely conditional to good health and thrift, the result of proper care.

About all the secret there is in keeping grapes in the winter is to avoid badly ripened clusters; wrap or pack in a dry material that will promote evenness of humidity and provide a temperature as near 40 degrees as possible. To wrap in paper or pack in sawdust answers very well.

The canned fruits and vegetable industry of this country is one of great proportions. According to the year book of the Department of Agriculture, the products in this line in 1891 reached an aggregate value of nearly \$30,000,000. The capital employed in this industry was only \$701,388 less than was employed in the creamery business.

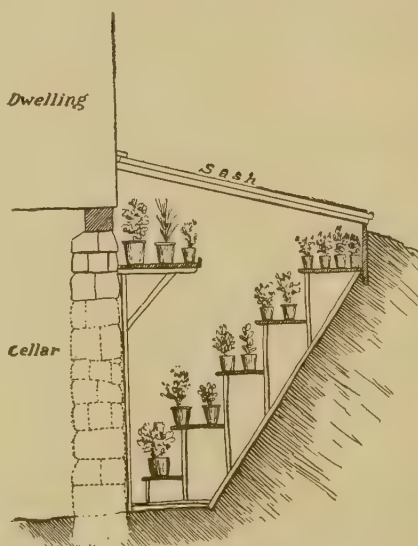
Lots of lawn seed and labor are wasted every year by sowing grass seed in the Indian summer days of November. It is too late. We do not recall a case where seeding in this month has been a real success. A good rule in lawn-making is to sow when the farmer sows wheat—spring or fall—namely, in September, or very early spring.

Have you ever thought of the graceful deutzia (*Deutzia gracilis*) as a house plant? It is excellent for the purpose. Dwarf, of deli-

cate bloom and foliage, and easily managed. Pot young shrubs now. Plunge the pots in the garden until after several hard freezes, then take to a cool cellar, from which bring the plants into heat in succession, say at intervals of a few weeks.

"Strawberries to-day." This was the notice we saw posted at a green grocer's door in this city on October 2d. Stepping inside the store we saw ten or twelve quarts of strawberries for sale, price 45 cents per quart. The fruit was of some ever-bearing kind, presumably what is known as the Alpine breed, a species which the writer has often grown. It is not very handsome and yet because of oddity and unseasonableness, the fruit sold with some readiness.

For many letters received during the past from readers of the MAGAZINE, telling of their success and failure in gardening, the editors are thankful. For many additional notes of this kind in the future, place will gladly be given in these columns, and with thanks. This journal proceeds on the principle that everybody knows more than anybody. So we want ideas on garden treatment from all our readers. Even the practice of beginners may afford lessons for the



PLANT PIT WITH OPENING FROM CELLAR.

best of gardeners. A good deal can be said on a postal card, telling of your successes with flowers, fruits or vegetables, and such will be welcome.

Plants in school-rooms. In a former school where I taught much attention was given to window plants. The windows were large, the sills deep, the temperature was right, and the plants were simply beautiful. They were a pleasant relief to the school-room and a delight to every scholar. Who will measure the influence of handsome specimens of plant life in school-rooms, in refining and elevating the taste of the young? In many instances the children come from unpleasant homes, and to such the touch of beauty in the school-room proves an education indeed. *E. J. Hallkirk, Chemung Co., N. Y.*

A Great Fruit State. Missouri, according to Secretary Ripley of the State Board of Agriculture, has a fruit crop this year that is valued at \$25,000,000. The fruit is of superior quality, owing to high color and fine flavor. The peach crop this year has been unsurpassed. One farmer sold 15,000 bushels; five counties in Southwest Missouri have reported 600,000 bushels. Thousands of acres have recently

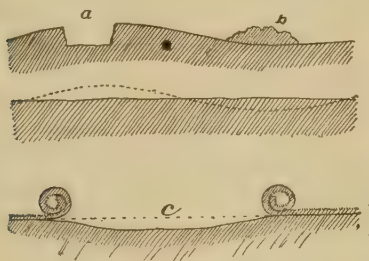
been set in grapes. More orchards have been planted in Missouri during the past two years, than in any other State in the union. Mr. Ripley concludes his report with the statement that for fruits of all kinds Missouri is admitted to lead the world.

Beets, turnips and other roots for early winter use, may be stored in barrels in the cellar, covering them with sand or soil to prevent wilting. Not a bad plan is that practiced by a friend of the writer's. He obtains enough thin turf from a meadow to make about four layers in the barrel. Then filling in some roots in a barrel he puts a layer of sod on top, then more roots and more sod until the barrel is full, finishing off with sod at the top. For spring use it is better to put these roots in a dry spot out of doors. Celery may be stored in narrow trenches in the garden or else be packed in a cool cellar, having the roots rest on damp earth. Cabbage may be pitted almost like roots. The heads should be inverted to keep moisture and dirt from the inside parts. For family use, to store some in a barrel that is covered with earth and opening from one end, answers very well. In all the ways of keeping vegetables the main object is to preserve something like uniformity of temperature, with a fair degree of moisture to prevent wilting.

Improved plant pit. Two years ago this fall I had a new style of plant pit made, since which time the wintering of tender pot plants has been an easy task. This plant pit may be called a cellar extension pit. It is on the south-east side of the house. As seen from the yard it has the appearance of a narrow hotbed frame placed against the house. It is entered, however, from the cellar by two doors through the cellar wall. From the cellar the pit has much the appearance of a greenhouse, which in fact it is, although without regular artificial heat. The warmth is obtained from the sun through the sash and from the cellar, with the addition of a lamp on the coldest nights. The pit is twelve feet long and five feet in width. There are six plant shelves the length of the pit, and which hold between 200 and 300 plants. At two places in the lower shelves no plants are kept, and these allow me room to stand in watering and otherwise taking care of the plants. The plants in such a pit require very little care in the winter. When the weather permits, air is admitted by raising the sashes a little, which can be done from the interior. On warm sunny days the sashes are raised more and sometimes they are wholly removed. Geraniums, and all other plants of like needs as to heat, do very well in such a pit. In March I start a box of slips on the upper shelf and by the time they are rooted these and other plants can go into a hotbed, to bring them along for summer bedding. My pit cost me about fifteen dollars to construct. It has been one of the best investments I ever made. Doors opening into the cellar are placed between the pit and the cellar and which are kept closed during warm weather. The sashes are secured by iron hooks which are fastened from below. *Mrs. L. E. Gains, Cuyahoga Co., Ohio.*

Fall lawn grading. Wherever lawn improvements are contemplated or are in progress, the rough grading should, as far as possible, be completed before winter sets in. There are a number of advantages in fall grading which should not be overlooked. Perhaps most important of all is that of having the soil thoroughly settle before the seeding is done in

the spring. Where there is deep filling, as in case of closing drain tiles and the like, the only perfect settling is that which occurs with rough grading; leaving the soil somewhat high and well trodden over the deep places—in the autumn. By then finishing the surface and seeding in the spring, there will be perfect evenness for all time. To do deep filling in the spring or at any time just before seeding or sodding, and more or less unevenness to the lawn surface is sure to result, no matter how carefully the soil is firmed. Two other advantages that attend fall grading, usually, are that labor and teams are not so scarce at this season, and frequently the ground is dryer and more economical to handle than in the spring. Sometimes where an even lawn grade might be desired in a home or other plat, where considerable variation exists in the surface, persons are deterred from doing the leveling up because of the labor involved. True, such work is laborious, but sometimes we forget that it is less so than appears at first sight. This we try to show in the upper part of the annexed engraving, by simply indicating that in



EVENING-UP THE LAWN.

such work each shovelful of earth counts for two. That is to say, take up a shovelful of the mound *a* and throw it into depression *b* and the change of two shovelfuls towards evening the surface is effected. In practice the writer has always been impressed by the rapid progress one makes in work of this kind, because of the principle illustrated. While on the subject, perhaps attention should be called to the correction of surface equalities in the case of old lawns. Depressions often exist as a result of unseasonable grading, and such as usually prove an eye-sore to the owner. To remedy defects of this nature, some persons scatter a little soil into the low places year after year, thus gradually filling them up. A much better course is that shown in the lower section of the engraving. This consists of cutting a thin layer of sod with a sharp spade, starting at the lowest point, and rolling it back as shown in the figure. Then after filling in fresh earth to bring it up to line *c*, compacting it somewhat, return the rolls of sod to their places, beating them down with the spade and the job is finished. By a reverse order of treatment slight rises in a lawn can similarly be disposed of. It is often a great satisfaction to be able to overcome lawn defects thus easily.

* *

ANEMONE WHIRLWIND.—Is a very distinct variety of the Japanese Anemone, possessing a sort of hen-and-chicken-like arrangement in its flower-buds in the way these latter surround the central flower, which is of the same color as in the well-known white form of this plant. These smaller buds are, moreover, quite numerous, while the complete head of the blossom is produced on exceptionally stout, vigorous stems, each about one foot in length.—*The Garden, London.*

PREPARING FOR THE FLOWER GARDEN.

MOST people wait until it is too late before beginning preparations for the flower garden, and the result is a poor display of flowers. Our preparations are usually begun in the fall, when the hotbed and coldframe are put in order for use in early spring. In January the catalogues begin to come and our seed and plant orders are sent in. We have discovered that it pays to send in early orders, as by doing so our seeds and plants come early and are sure to be here when needed; then, too, the first served usually have the best there is and the late ones take what is left.

The hotbed is usually made about the middle of March and is $4\frac{1}{2} \times 7$ feet in size. The sides of the frame are furnished with cleats into which the ends fit, and a hook and staple at each corner fasten them, so there is no danger of their slipping apart; by having them made in this manner they can be easily taken apart when the season is over and stored until needed again. Seeds are planted therein as soon as the first heat has passed.

The coldframe is made in the same way, but instead of having a pit filled with manure, the frame is set directly on the ground, in the garden, where the soil is rich and well cultivated. As soon as the spring season is over the frame is removed and late turnips or cucumbers planted where it stood.

The hotbed is used alone until about the middle of April, to hasten the growth of plants and to germinate seed quickly; after that time there are usually many

plants that require no more forcing, yet need to be protected from frost and cold winds,—that is when the coldframe is useful; tomato and cabbage plants are hardened off in it, to prepare them for setting out, and they become very stocky in a short time. The size of the coldframe is $5\frac{1}{2} \times 8$ feet, and to show how much can be raised in the two frames I will mention what has been grown in them, shallow boxes or pans being used for planting flower seeds, excepting nasturtiums and castor beans, when small pots were used: Twenty-five nasturtiums, fifteen castor beans of the Zanzibarensis variety, thirty cleome or spider flowers, fifty pansy, fifty godetia, twenty salvia, nearly 200 Branching aster (from two papers of seed), twenty-five Childs gladiolus from seed saved from my own plants, twenty-five California poppy, ten datura Sweet Nightingale, thirty dianthus, twenty-five moonflower of three kinds, and some lavender plants; these seedlings were transplanted when large enough and placed in the coldframe until time to plant out. A good-sized cutting box, filled with sand, occupied one corner of the hotbed, and many slips were rooted which were also transplanted to shallow boxes when sufficiently rooted,—there were about sixty plants in all, rose and other geraniums, double petunias, double sweet alyssum, heliotrope, Paris daisy, and dusty miller for bedding purposes. Over 200 coleus plants, rooted in water in the house, were placed in boxes in the hotbed,—part of them were used in one solid bed and the rest as a border for canna and geranium beds.

Taffy was a Welshman
Taffy was a thief,
Taffy came to my house
And stole my jar of beef;
Taffy little knew of the
Good thing he had got,
Till he mixed my **LIEBIG**
EXTRACT
With some water that was hot

LIEBIG

COMPANY'S EXTRACT OF BEEF.

Twenty-four tuberose bulbs in pots and boxes, fifty dahlias and nearly 100 cannas each took their turn in the hotbed and were removed to the coldframe when well started, to give room for something else. The dahlias sprouted nicely, but as the season was cold and backward they were left in the frame until June 1st.

The cannas comprise several new sorts, as Austria, Italia, Flamingo, Philadelphia, Papa, Coronet, Alsace, Giant Crimson and Madam Alphonse Bouvier; the remainder are those kept over from last year,—Queen Charlotte, Alphonse Bouvier, Paul Marquand, Golden Star, J. D. Cabos, Florence Vaughan, Mad. Crozy, Crown Jewel, Egandale, Ehemani, Brilliant, Explorateur Crampel and alba rosea grandiflora. We have always appreciated our canna bed, and now it has grown to be three beds, but we admire them more and more each year, as they make such a grand display all through the season with so little care. One bed nine feet in diameter has thirty of the finest sorts in it; another, twelve feet in diameter, has the same number of cannas with the addition of two rows of coleus around the edge; the remainder of the cannas being smaller plants, were placed in one bed without reference to size or color, and it may be the handsomest one of the lot before the summer is over.

Several auratum lilies and sea daffodils were put in pots and tubs where they will remain all summer, and were given a start in the hotbed.

Besides the plants mentioned, a great number of tomato and cabbage plants were raised,—not less than 200 of the former and seventy-five of the latter.

This does not include all the preparation for the flower garden, as many seeds of annuals were planted directly in the ground. Over 700 gladiolus bulbs were planted and new shrubs and vines set out; eighteen new hybrid tea and perpetual roses being among them. The salvia plants are set out in a solid bed by themselves, and a large bed of verbenas is near it. Pansy and aster plants can be had at a low price, but I prefer to raise them myself,—the asters I am quite particular about, as I raise nothing but the Branching aster.

L. HOLMES.

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FARMERS' HOMES.

WE often see in the papers almost slurring articles on farm life and farmers' wives. I wish to show how luxurious even the smallest farmer's home may be, if he and his have the willingness to work. One of the greatest dangers to our people and the working people all over our fair land today, lies in always wanting to grasp the whole world and give nothing in return.

I am a farmer's wife, and was a farmer's daughter at a time when luxuries were rare things; when a barrel of

apples was doled out to us one by one; when we received our education in the old log schoolhouse, with slabs for a seat and another with the smooth side turned up served as a desk; when the Indian's wigwam was not a curiosity, and "I ran many a day all the way to school for fear I might meet the dusky occupant on his tramp; when I sat night after night filling the old candle-moulds that we might have the wherewithal to light us through another year's evenings; the wild strawberries of the fields and the blackberries of the forests and the wild plums were our fruits, which were often put up in maple sugar for the next winter's supplies; therefore I think I can thoroughly appreciate the things of today, and I wish to indicate some of the things that can be raised on an ordinary farm, with the care that can be given by the family.

In the first place, with an ordinary hotbed, which anyone can build, you can have the most delicious radishes and lettuce for the table until asparagus and spinach are ready. Oftentimes, if one is near a small town, the surplus can be easily disposed of; I have often sold \$50 worth of cabbage, and usually sell a sufficient quantity of strawberries to buy the fruits I cannot grow. Strawberries three times a day for weeks, with delicious cream and sugar,—the very thought makes one long for spring. Then come raspberries, currants, gooseberries, cherries, grapes; then there is the honey, of which a good part is stored for winter and the surplus sold to pay the expenses. These are what may be called the luxuries; then there are the eggs and poultry, the surplus from which will net a nice little amount for some member of the family who will care for them,—perhaps reaching into the hundreds if good care is taken.

This is not theory, but actual fact. My family is large, and supplies must be on a large scale, and carefully stored away for winter use, and is there to draw from at only first cost,—no middleman's profits.

Last, but not least, are the lovely flowers; how I delight in watching for them, and as soon as the snow is gone I look for the crocuses and then the tulips. In June the lovely roses, not only enough to fill the house with perfume, but to give away by the armful. Sweet peas, gorgeous spikes of salvia, gladiolus; and for the Thanksgiving table lovely chrysanthemums. People who see my flowers often say "Is it not lots of work?" Certainly it is, but how the beauty repays one! I raise all my plants for the garden in the hotbed, transplanting as soon as the weather will permit; this winter I shall have a little greenhouse, and it makes me long for a larger one.

These are only a few things on one farm,—think of the millions of homes which can be made beautiful. If this statement of my home practice will help

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Is prepared in the largest leather factory in the world by the makers of Vici Kid—the most noted leather in the world. It gives a shoe a bright and lasting lustre, makes it soft and pliable, keeps it from cracking in wet and dry weather. The constant use of Vici Dressing means a saving in shoe leather which the student of economy can't overlook. Ask the dealer for it. An illustrated book, telling how to care for shoes and increase their wear, mailed free.

ROBERT H. FOERDERER, Philadelphia, Pa.

farmer's wives, sons, and daughters to make farm life pleasanter it will serve a mission of humanity.

A FARMER'S WIFE.

.

POISON IVY.

The *American Garden* notices the death on the 7th of last September of Mrs. Mary King, of Chester, N. Y., from the effects of poison ivy.

"She came in contact with a poison ivy vine early in July, and her whole system seemed affected by the poison."

The same journal publishes some notes of a contributor in relation to the broad-leaved plantain, *Plantago major*, as a remedy for the disease induced by poison ivy. "Make a strong tea of the leaves. Take two tablespoonfuls several times a day; also, bathe the affected parts with the tea."

As evidence of the value of this remedy the writer says:

"One member of our family could never go near the ivy without being affected, twice being dangerously poisoned. After we learned about using plantain as an antidote, never was she again seriously poisoned, and also learned from experience that if she took a sponge bath of the tea and used it internally for twenty-four hours after she had been near or through poison ivy, that she would not feel any effects of poisoning at all."

.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French, or English, will full directions for preparing and using. Sent by mail, by addressing with stamp, naming this paper, W. A. NOYES, 820 Powers Block, Rochester, N. Y.

SOME ODD PLANTS AND TREES OF FLORIDA.

It is not generally known that there is a wild orchid which habitually thrives as an epiphyte in the United States. But in Florida the single species of orchideous air plant found east of the Big River, is very abundant. It grows everywhere; on the limbs and trunks of live and dead trees, roofs of old buildings, and I have found it attached to stones, where it thrives equally well. It is the Epidendrum conopseum, of botanists, and clings to any rough substance by its thick, matted roots, from which springs a thick, tuberous rootstock, with a few, generally two or three, lanceolate leaves two or three inches long. In the summer a little greenish-white and purple flower is put forth, which though insignificant is delicate and attractive, and has the marked features of the tropical orchids.

Another air-plant which is abundant, is what is called the tree-fern, Polypodium incanum, a delicate little plant two to four

inches high, and thrives best upon the rough bark upon the upper side of limbs, or the slanting trunks of live oaks, and sometimes on house roofs. This little plant often looks dead, and its leaves are curled and dried by dry weather; yet within an hour after a rain those same leaves appear as fresh and green as ever they did, and are beautiful to behold.

There is another air-plant, Tillandsia caespitosa, the most abundant and universal of all, which resembles the pineapple plant in make-up, but is much smaller. Often over fifty of these parasites may be seen fastened to a single tree. Its appearance is somewhat like the aloe, or century plant as it is familiarly called. This plant thrives as well on the smallest twigs as on the trunks of the largest trees, and when it is blown from its attachment it lives as well on the bare ground, or will blossom while hung up in the house by a string. The blossoms are purplish above, and so small as to be hardly noticeable, but there is a stem of bright red leaves leading up to the smaller flowers, which look like living flame, and make a beautiful appearance from the trunks of the moss-covered live oaks and green-topped palmettos, often standing up for a height of over thirty inches, and with a stalk like a red-hot poker over a foot long.

The so-called Spanish Moss, Tillandsia

usneoides is a true parasite, and by its growth and persistence kills many trees. A favorite location is the spreading branches of the live oak where it is found trailing in festoons ten feet or more in length. A spray broken off and placed most anywhere will form attachments and thrive. As an instance of its vitality and persistence, I will say that a lot of this long, gray parasitical plant was used in packing some specimens for transportation. After being over two weeks in the trunk, the moss was hung over the pictures in the house at the north, and it soon blossomed and continued its yellow flowers for a month in a dry room.

MORRIS GIBBS, M. D.



A Window in the Garden

SENT FREE.—3 fine Begonias, 2 beautiful Carnations, 3 Geraniums—all vigorous, healthy plants ready for winter blooming, securely packed and sent post-paid free to every one sending 50 cents for one year's subscription to WOMANKIND, the great home monthly. You will like the paper for its bright, clean stories and helpful suggestions, and you'll like the plants. Safe delivery guaranteed. Address

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Springfield, Ohio.

MENTION THIS PAPER.

CATARRH CAN BE CURED.

People are beginning to learn that CATARRH is a local disease, caused by repeated colds in the head, causing enlargement of the soft bones of the nose, thickening and ulceration of the lining membrane with its constant discharge of unhealthy mucus and pus; that every breath is tainted before the air reaches the lungs; that it is the cause of the constant hawking, expectorating, nose-bleeding, headaches, partial loss of hearing, noises in the head, deafness, impaired vision, lassitude, debility, loss of rest and impaired appetite, and bad breath; that it is the principal cause of bronchitis, pneumonia and consumption of the lungs; THAT IT CAN ONLY BE CURED BY LOCAL TREATMENT; that the AMERICAN CATARRH CURE is the only remedy known that can cure the disease; that it is not a patent medicine, but the private prescription of a physician, who devoted twenty-six years to the study and treatment of the disease, and who thought the time had come when the public should have the benefit of his experience.

AMERICAN CATARRH CURE.

Sold by all druggists, or mailed anywhere, for \$1.00.

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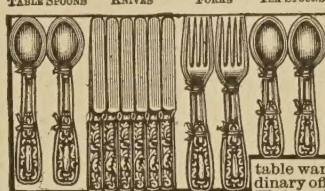
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VIOLETS AND PANSIES.

THERE are flowers and flowers, but are there many that have a greater capacity for pleasure-giving than violets and pansies? One to bless the wintertime, the other adding joy and beauty to the summertime. Both are easily had in perfection by any one who has a few square feet of soil,—and it matters not what kind of soil. If rich and loamy, all right; if poor and clayey, it can soon be put in condition, if one have only a little means but plenty of spirit. Of violets there are not many kinds, but of pansies their varieties are legion. Of the first sufficient variety is obtainable in bringing together the long known single deep blue, the double blue, the light blue, the double white and the newer "California." Our verdict is: Any violet will do that is blue, and that is fragrant and that thrives.

Few in the South think of growing

violets under cover, though sometimes it is desirable when blooms are wanted in abundance in the early winter. Where violets are grown in beds in the open, it is very easy to plant any part of these under glass temporarily in the fall and secure all the blooms wanted in December, however bad the weather may be. In fact, there is nothing in all horticulture so easy or dainty as this glorious flower in perfection.

Where there are small beds or plats in the flower garden there is nothing more suitable or more pleasure-giving than to have their borders of sweet violets, part white and part blue, if so desired.

Pansies for color, violets for fragrance; and both should have a large place in the esteem of the artist gardener.

We have so many splendid pansies now it is not difficult to make such choice that one can, in a few months time, produce a

scene of marvelous floral beauty. The varieties under the name of "Imperial German" show a range and variety of color that is entrancing; the "Black Prince" or "King of the Blacks," "The Snow Queen" or "Snowy White," the blue "Beaconsfield," the "Silver Seam" or "Silver Edge," the "Rainbow" or quadricolor, the "Yellow Gem"—it matters not under what name they may be listed, it requires but a few moments of time to choose and arrange and sow a proper order of variety so that when the matured plants break into bloom there

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Are given TO ALL OR ANYONE who can supply the MISSING LETTERS in the following eight words or ANY THREE OF THEM.

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PUT LETTERS IN PLACE OF STARS AND COMPLETE THE WORDS GIVEN BELOW.

1. * * R * * * O * * U S Characteristic of all savage or uncivilized races.
2. R * L I * * * * * That which every person should experience and cultivate.
3. L * * * E * * Y Peculiarly appropriate when reference is made to the gentler sex
4. C * L L * * I * * N Something which all should try to avoid.
5. * I * D N * * * S A merciful attribute that should be possessed by all.
6. B * D S * * * A * Useful in any house, especially sleeping rooms.
7. L * * D S * * * * E A work of nature that appeals to the sight.
8. * E * L * * U S A condition of mind. A disposition particularly manifested by women.

REMEMBER You are to put a letter in place of each star thus forming a complete word: If you succeed in making three correct words you will receive \$5.00. If you succeed in making all of the words, you receive \$100. It does not depend upon the chance of being first, each successful contestant receives a cash reward for his (or her) labor of from \$5.00 to \$100.00. Prizes promptly paid. Mention when you send your list of words how you want prize money sent.

CONDITIONS. The only conditions are that in order to compete on four words, you must send 25 cents for a three months' subscription to The National Homestead Magazine. Send the four words (any four of the eight you choose), when you send your subscription and 25 cents. If you want to compete on the entire eight words, you must send 50 cents for a six months' subscription. Number each word to correspond with numbers above.

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OBJECT. The National Homestead Magazine is not a cheap publication; its merit is conceded. With a circulation of 200,000 monthly its advertising revenue is worth to us \$100,000 yearly. We can therefore afford to expend a large portion of this amount in securing an additional 100,000 subscribers, because not only is that revenue good for a year, but for years to come. We believe, also, that the merits of The National Homestead Magazine will hold you a subscriber for years to come when you know its merits without the extraordinary inducements herein offered. The magazine is nicely illustrated, beautifully printed and bound with a handsome cover. Each month it gives a new design and plan of a home. It shows how to build, decorate and furnish a house from cellar to garret at a minimum cost. It contains a score of features new and interesting to the entire household. Its price is \$1.00 yearly.

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With a view to securing subscribers quickly, we offer, in addition to the above presents, for the first ten correct lists, \$2,000. For the second ten, \$1,000. Should more than the required number send correct answers then the money will be awarded the twenty best lists in appearance. This is a genuine bona fide offer by a reliable publishing house. We refer to any bank, mercantile agency in New York City. We pay prizes promptly and honestly, and to assure you of this we shall invite three representative men from New York newspapers to make the award and see that all are treated fairly. We also agree to refund money to any dissatisfied subscriber at any time. Can we do more? Here is a chance to secure cash for a little study. This contest closes and no lists will be received after December 31, 1897. Complete list of words and winners' names will be printed in January issue of our magazine. If already a subscriber your subscription can be extended. No notice taken of letters that do not contain subscription money.

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will be nothing left for the eye to desire. Put in the seeds, do a little work and trust Nature to endow with life a scene that no human hand and eye can imitate in color.

In arranging for these contrasts that impress you as being in the highest degree artistic, with strips of board divide the coldframe into as many sections as there are different colors to be grown. Label each section carefully so that there will be no mistake. If the pansy-bed-to-be is circular, as it ought to be, commence at the center and set three or four plants of whatever color is to form the eye, or hub, of the circle—black, for instance—then draw lines six inches apart around the circle and three inches from each side of this line set a plant of the next color selected, setting the plants zigzag instead of in twos. The border color of the circle should be set with four rows of the same color, rows three inches apart and zigzag also, as in the beginning. The soil should be deeply dug and pulverized and well firmed before the plants are set out. If there is any question of the richness of the soil, work in plenty of bone dust—dust, not meal—as the soil is being prepared for the plants.

Where proper material for the purpose is readily procured, mulching is almost always a great advantage to both pansies and violets. Finally, let no one who has any flowers at all be without these royal pleasure-givers.

SAMUEL A. COOK.

Milledgeville, Ga.

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We herewith give a list of jumbled words from which can be made the names of seven of Uncle Sam's new warships. They are easily transposed, when you know how to do it. For instance, the word: RERITO is "Terror." Try it. We will give:

- First Prize in Cash—\$50 to ten persons first sending correct answers.
- Second Prize in Cash—\$50.00 to next 20 persons sending correct answers.
- Third Prize in Cash—\$50.00 to next 50 persons sending correct answers.
- Fourth Prize—Kombi Camera to each of next 25 persons sending correct answers.

Should more than the required number send correct answers, the awards will be made according to date letter is mailed, hence it is advisable that your letter should be among the first. You can win one of these prizes if you are quick and use your brains. The above rewards are given free as an inducement to read **New Ideas**, a handsome 16-page illustrated journal covering an entirely new field. It gives information about the latest inventions and progress in science, illustrating the most striking novelties for business and household use. Its subscription price is the only cheap thing about it. Send answer to-day!

OUR CONDITIONS.—You must send with your answer 25 cents (stamps or silver) for a Six Months' Trial Subscription to **New Ideas**.

ALL SURE OF A PRIZE.

Aside from the prizes above named, we will give a special prize to such persons whose letters fail to reach us in time for the Cash Prizes, or who do not correctly answer the list, provided that 25 cents in silver or stamps be sent for a six months' subscription to **New Ideas**. These special prizes are awarded along the line of **Novelties, Music, Decorative Art, History and Fiction. Be sure to state in letter which you want.** This contest will close Tuesday, Nov. 30th, and names of prize winners will be announced in Jan. number of **New Ideas**. Address, **New Ideas, Sta. K. 230, Philadelphia, Pa.**



The Bride of Niagara Sweet Pea.

At the beginning of the present year there was some adverse criticism directed at this flower, which in some cases may have prevented its planting; yet I rather think it served as an advertisement, as such criticism often does. It is not my purpose to enter into a discussion of the motives controlling those who spoke or wrote adversely of the Bride of Niagara; suffice it to say that I do not think that anyone acquainted with the plant would speak otherwise than in its praise, unless prompted by self-interest or jealousy. I have grown the Bride two seasons, and, if possible admire it more this season than last. I can certainly speak with more assurance of its merits after the second season of experience. The color is such a delightful shade of pink as to command attention at once. It surpasses anything of its color among sweet peas. The doubling of the banner does not, as was predicted, mar the symmetry of the flower. Indeed those having three or triple banners (and they were numerous), with their ruffled and fluted edges, were very models of graceful beauty.

My plants of the Bride of Niagara were the most profuse bloomers of any sweet peas I ever saw; the six plants I grew the past season furnished me a daily average of sixty-five flower stems, and probably eighty-five per cent. of the stems bore three blooms each. The plants were a sheet of bloom from top to bottom every morning. Of course no seed was allowed to form,—every blossom was cut each day; beyond this they received no attention further than I give to all such plants.

By actual count seventy-eight per cent. of the flowers had two or more rows of petals or banners; many of these had three and a very few four rows. Observations as to percentage of doubles were made every fifth day during the season, and the lowest record for any one day was sixty-five per cent., the highest eighty-four per cent.; so it will be seen that the percentage of doubles was constant. The double flowers were, as a rule, more perfect and symmetrical in their parts than the single ones on the same plants. The largest individual bloom measured was two and five-sixteenths inches and many were two inches in diameter. It would be safe to estimate the average size at least one and one-half inches for the entire season. I do not know whether such results can be obtained elsewhere, for this country is a veritable paradise for the sweet pea. I have grown the common single varieties which measured nearly two inches. The finest single spray of flowers observed on the Bride was one bearing four blooms, all double, of large size and most perfect form. I often used the Bride for floral decorations on public occasions, festivals, etc., and the universal comment was "How beautiful! and such large ones, too!"

To sum it all up, the Bride of Niagara is potent with all the graces usually ascribed to a sweet pea; has a color distinctively its own, and a most pleasing one it is; a doubling of its banners, which adds most effectively to its beauty, and which is found in a large enough percentage of its blooms to give it a fixed type. Added to these features is its vigorous growth and freedom of bloom. Those who have grown it the past season will agree with me that it is a valuable acquisition, and to those who have not yet tried it let me say "Add it to your list next season, and you will be well pleased with it."

S. L.

Douglas, Wyoming.

PHYSALIS FRANCHETTI—Any gardeners who are in doubt concerning the value of this handsome Japanese plant should, if possible, pay a visit to Kew, where two beds in the herbaceous grounds are devoted to it. The species is of erect growth and attains three to four feet high, flowering and fruiting profusely. A day or two since, when inspecting the plants, we noticed that many of the huge bladder-like calyces were already finely colored, the rich orange-scarlet shade being very showy. Some of the larger calyces would be three times the size of the better-known kind.—*The Garden, London.*

Window Flower Stands, New. Send 2-cent stamp for circulars. Address S. E. Covington, Bellefontaine, Ohio.



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We will give one lady in each town or village a full sized \$2 case of **LUXURA**, the only Toilet article in the world that will develop the bust or any part of the female form, remove wrinkles, etc. Write to-day for it. **G. M. WIGGINS**, 112 West 32d Street, New York.

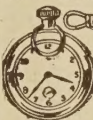
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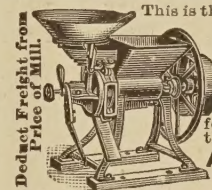
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CONTENTS.

Anemone Whirlwind	11
Book Notes	8
Bride of Niagara Sweet Pea, The	15
Buds and Fruit	10
Cabbages; Tuberosus Begonias; A Plant in a pot; Keeping Grapes in Winter; Canned Fruits; Lawn Seeding; Deutzia gracilis; Strawberries in October; Plants in School-rooms; A great Fruit State; Wintering Beets, Turnips, etc.; Improved Plant Pit; Fall Lawn Grading.	
Coniferales, No. 3	3
Cooking Potatoes	7
Farmers' Homes	12
Flower Garden, Preparing for the	11
Lawn's Surface, Contour of the	2
Letter Box	9
A Native Solanum; Snake Cactus; A Moss-like Plant; Cherokee Rose; Wineberry; Care of Cycas; Rose Seeds; Pruning Lilac and Weigela.—Scilla; An Unsatisfactory Rose; Asparagus.—Roman Hyacinths.—Tuberose; Fuchsias.—Hydrangeas.—Sweet Peas.	
Lily of the Valley, The	1
Nut Trees, Plant	5
Peachbud Protection	8
Physalis Franchetti	15
Plants, Wintering, in the Cellar	9
Plants and Trees of Florida, Some Odd	13
Poison Ivy	12
Potato Scab	7
Sequoias in Rochester	8
Spiraea arguta	6
Violets and Pansies	14

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